

REMARKS

Reconsideration and allowance of the above-referenced application are respectfully requested.

I. STATUS OF THE CLAIMS

None of the claims are amended herein.

In view of the above, it is respectfully submitted that claims 2-21 and 23-44 are currently pending and under consideration.

II. REJECTION OF CLAIMS 2-21 and 23-42 UNDER 35 U.S.C. § 103(A) AS BEING UNPATENTABLE OVER MIYACHI ET AL. (USP# 5,920,414) IN VIEW OF ROBERTS (USP# 6,031,647)

The present invention as recited in claim 10 relates to an optical sender which comprises a light source, an optical modulator, and a shutting down means. The light source outputs a light beam. The optical modulator modulates the light beam in accordance with a main signal to output an optical signal. The shutting down means shuts down the optical signal when receiving a wavelength alarm relating to the wavelength of the light beam. The shutting down means comprises an optical element for receiving the optical signal output from the optical modulator, and means for controlling the optical element so that the transmittance of the optical element is reduced when receiving the wavelength alarm.

In the present claimed invention, the optical signal is shut down in accordance with the wavelength alarm. Thus, in starting up or shutting down a system including the optical sender or in case of a error relating to, for example, temperature control performed in the optical sender, an optical signal whose wavelength is deviated from a predetermined range can be prevented from being output from the optical sender. As a result, when the optical sender outputs an optical signal, the wavelength of the optical signal is maintained within the predetermined range. Therefore, by configuring an optical sender as described above which is included in a WDM system, interchannel crosstalk can be prevented without using an optical bandpass filter.

The Examiner states that Miyachi does not specifically disclose shutting down an optical signal when receiving an alarm, but believes that Roberts teaches shutting down (i.e., damping) the optical source. In item 4, on pages 8-9 of the Office Action, the Examiner further states that it would have been obvious to provide a shut off device as taught by Roberts in order to shut down or reduce the optical transmittance of an abnormal optical source. Thus, the Examiner

states that the motivation of providing a shut off device is to reduce or eliminate crosstalk.

However, it is respectfully submitted that Robert is silent regarding the teachings of a WDM system configured to reduce or eliminate interchannel crosstalk. Instead, Roberts teaches a method for attempting to eliminate or minimize the transient effect of one channel or another in an optical amplified system, by improved gain control, once the transient reaches the sensitive element (see column 2, lines 20-23). Thus, Roberts merely discloses a method suitable to various optical elements sensitive to power changes (see column 1, lines 52-62).

In light of the above, it cannot be suggested that one of ordinary skilled in the art would have been motivated to combine the teachings of Roberts with Miyachi to disclose the features recited in claim 10 of the present application.

Similar to claim 10, independent claims 19, 20, 31, 40, and 41 recite "shutting down said optical signal when receiving a wavelength alarm relating to the wavelength of said light beam," which distinguish over the teachings of Miyachi and Roberts.

In view of the above, it is respectfully submitted that the rejection is overcome.

III. REJECTION OF CLAIMS 43 AND 44 UNDER 35 U.S.C. 103(A) § AS BEING UNPATENTABLE OVER MIYAZAKI (USP# 6,040,931)

The present invention as recited, for example, in claim 43 relates to an optical sender which comprises "a shut-down device shutting down the optical signal when receiving a wavelength alarm relating to a wavelength of the light beam, the wavelength alarm being provided inside the optical sender.

Miyazaki discloses an optical communication system having an optical transmitter which includes a shut-off unit 26.

Regarding the teachings of Miyazaki, the Examiner states that since the shut-off units shuts down the optical signal if the monitored wavelength parameter does not satisfy the predetermined condition, it would have been obvious to indicate that a signal, which transmitted from the monitor and judgment device that causes the shut off circuit to shut down the optical signal, as an alarm signal.

In light of the Examiner's statement, it cannot be suggested nor would it have been obvious to one of ordinary skill in the art to conclude that Miyazaki teaches a shut-down device which shuts down an optical signal when receiving a wavelength alarm. Moreover, Miyazaki does not teach the claimed shut-down device as recited in claim 43 of the present application.

Thus, Miyazaki does not teach or suggest the features recited in claim 43 of the present application.

Similar to claim 43, claim 44 relates to a method comprising "shutting down the optical signal when receiving a wavelength alarm," which distinguishes over Miyazaki.

In view of the above, it is respectfully submitted that the rejection is overcome.

IV. CONCLUSION

In view of the foregoing amendments and remarks, it is respectfully submitted that each of the claims patentably distinguishes over the prior art, and therefore defines allowable subject matter. A prompt and favorable reconsideration of the rejection along with an indication of allowability of all pending claims are therefore respectfully requested.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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